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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/790,529

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Takashi Oda

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22428 7590 11/14/2008  
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EXAMINER

PATTERSON, MARC A

ART UNIT

PAPER NUMBER

1794

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DELIVERY MODE

11/14/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/790,529	<b>Applicant(s)</b> ODA ET AL.	
	<b>Examiner</b> MARC A. PATTERSON	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-12 and 49-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-12 and 49-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

**WITHDRAWN REJECTIONS**

1. The 35 U.S.C. 102(b) rejection of Claims 1 – 3, 5 and 7 – 11 as being anticipated by Birchall et al (U.K. Patent No. 2010287).
2. The 35 U.S.C. 103(a) of Claims 4, 6 and 49 as being unpatentable over Birchall et al (U.K. Patent No. 2010287).
3. The 35 U.S.C. 103(a) of Claim 12 as being unpatentable over Birchall et al (U.K. Patent No. 2010287) in view of Zaima et al (European Patent 0885937).

**NEW REJECTIONS**

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 4 and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase ‘50%’ is indefinite as it is unclear if the percentage is by weight, volume, etc.
6. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the

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invention. The phrase '30 to 70%' is indefinite as it is unclear if the percentage is by weight, volume, etc.

7. Claims 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase '80 to 90%' is indefinite as it is unclear if the percentage is by weight, volume, etc.

***Claim Rejections – 35 USC 102(e)***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1 – 6, 8 – 10 and 50 - 55 are rejected under 35 U.S.C. 102(e) as being anticipated by Koski et al (U.S. Patent No. 6,420,456 B1).

With regard to Claims 1 – 2 and 50 – 52, Koski et al disclose a resin composition (polyethylene; column 16, line 29) comprising a compound comprising silica (column 7, line 20), therefore oxidized silicon, and a hydrophobic group directly bonded to the surface that is OR group where R is a organosilicon compound containing an alkyl group (column 8, line 62; Figure 1); the silica also has a polar group bonded to the surface comprising hydroxyl, as shown in Figure 1.

With regard to Claims 3 – 6, Koski discloses treatment of the silica (column 7, lines 31 - 34), therefore discloses the bonding of a second group as shown in Figure 1, therefore which comprises a second polar group comprising amino as shown in Figure 1.

With regard to Claims 8 – 9 and 53 – 54, a length of the oxidized compound is 1 nm and 380 nm or less (column 7, lines 38 – 44).

With regard to Claims 10 and 55, the compound is present in the amount of 1 to 60% by weight (column 18, lines 34 – 44).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 11 – 12, 49 and 56 – 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koski et al (U.S. Patent No. 6,420,456 B1) in view of Zaima et al (European Patent 0885937).

Koski et al discloses a filler comprising silica for a resin as discussed above. With regard to Claims 12 and 57, Koski et al fail to disclose a resin comprising polycarbonate.

Zaima et al teach silica as a filler (page 4 lines 1 – 15) for polycarbonate (page 3, line 51) for the purpose of obtaining a resin that is useable as a coating (page 12, lines 52). One of ordinary skill in the art would therefore have recognized the advantage of providing for the

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polycarbonate of Zaima et al in Koski et al, which comprises a resin, depending on the desired use of a coating of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a polycarbonate in Koski et al in order to obtain good adhesion a resin useable as a coating as taught by Zaima et al.

With regard to Claims 11, 49, 56 and 58, the thermoplastic resin includes acrylic resin (page 3, line 40).

*ANSWERS TO APPLICANT'S ARGUMENTS*

12. Applicant's arguments regarding the rejections of the previous Action have been considered and have been found to be persuasive. The rejections are therefore withdrawn. The new rejections above are directed to amended Claims 1 – 6, 8 – 12 and 49 – 58.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497.

The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Marc A Patterson/  
Primary Examiner, Art Unit 1794